2-Channel Hybrid Ring Combiner for 450 MHz Transmitters

DESCRIPTION

- Combining two transmitters or receivers on the same antenna.
- Better utilization of good antenna position.
- Two antennas on the same transmitter or receiver.
- Combining two signal generators.
- The only combining option with very small Tx-Tx frequency spacing.
- 30 W load supplied (other loads or no load as option).

SPECIFICATIONS

Electrical	
Filter Type	Hybrid Junction
Frequency	380 - 480 MHz (see ordering)
Max. Input Power	30 W per channel (max. 100 W with larger load)
Insertion Loss	< 3.4 dB @ 10 MHz BW < 3.7 dB @ 20 MHz BW
Impedance	50 Ω
Isolation Tx1 - Tx2	> 35 dB @ 10 MHz BW > 30 dB @ 20 MHz BW (* see note)
VSWR	< 1.5:1 with all other ports terminated with 50 Ω
Load	30 W load fitted (other ratings available) (** see note)
No. of channels	2

Mechanical	
Connection(s)	N(f) (other on request)
Dimensions	210 x 85 (incl. conn.) x 42 mm (excl. load) / 8.30 x 3.35 x 1.65 in.
Weight	Approx. 0.7 kg / 1.54 lb. (excl. load)

Environmental	
Operating temperature range	-30 °C to +60 °C

ORDERING

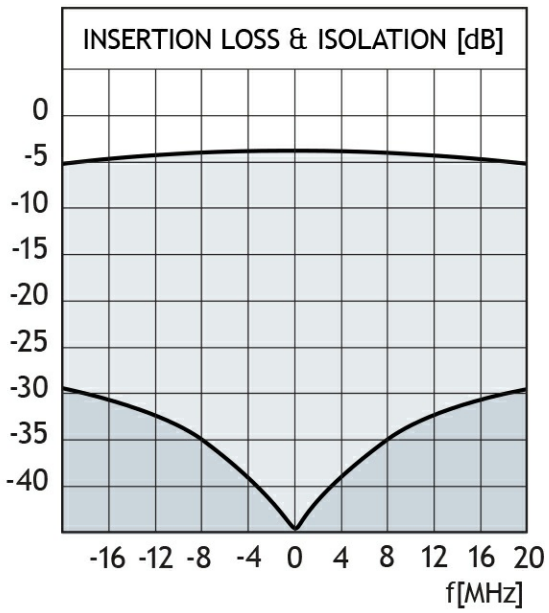
Model	Product No.	Frequency
PRO-PHY450-2-TETRA	210001126	380 - 400 MHz
PRO-PHY450-2-1	210000580	400 - 420 MHz
PRO-PHY450-2-2	210000546	415 - 435 MHz
PRO-PHY450-2-3	210000579	430 - 450 MHz
PRO-PHY450-2-4	210000542	445 - 465 MHz
PRO-PHY450-2-5	210000570	460 - 480 MHz
PRO-PHY450-2-6	210003039	450 - 470 MHz

NOTE

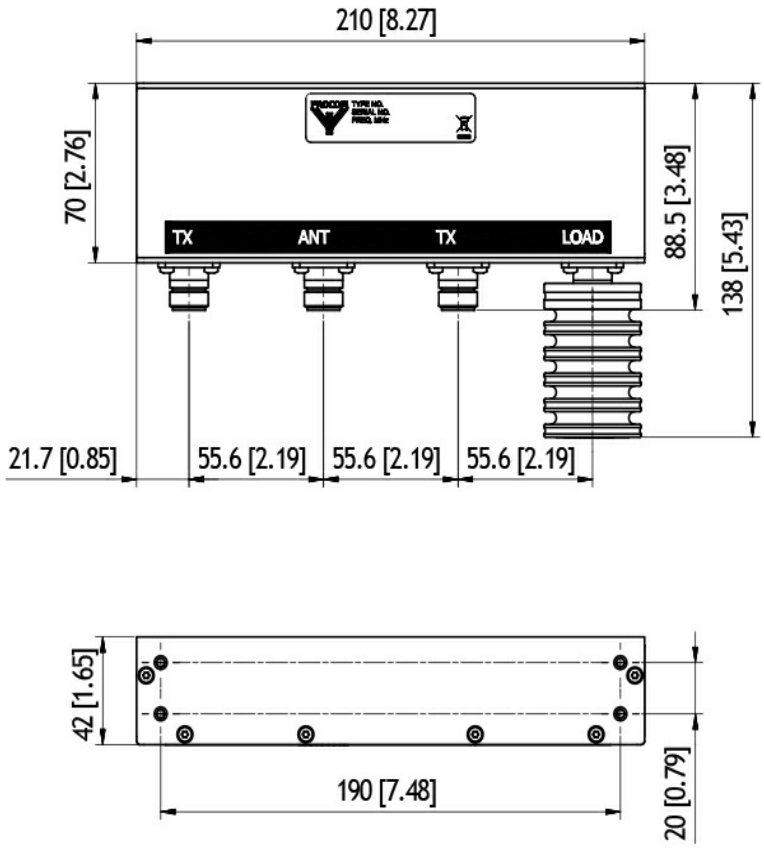
* The isolation between the Tx ports is directly dependent on the terminating VSWR on the antenna port. With an antenna load VSWR = 1.5, the isolation between the two Tx ports will be reduced to 20 dB @ 5 MHz bandwidth.

** The VSWR of the loads should be < 1.1! The load should be able to dissipate 1/2 of the total input power. E.g.: With 50 W input in total for the two channels, the load should be able to dissipate 50 W x 1/2 = 25 W.

TYPICAL RESPONSE CURVE



MOUNTING DETAILS



All dimensions are given in mm [in.]